ILLINOIS POWER COMPANY

U-0090
L14-79(03-07)-9

500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525

March 7, 1979

Mr. James G. Keppler
Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

Clinton Power Station Unit 1
Docket No. 50-461
Construction Permit CPPR-137

On February 1, 1979, Illinois Power Company verbally notified Mr. T. Vandel, NRC Region III, of a potential reportable deficiency per 10CFR50.55(e)(1)(iii). We have since conducted an investigation as summarized in the attached report and all defective welds have been repaired.

Because of the high cost of detailed engineering analysis, it has not been determined that the welding defects were serious enough to classify them as reportable. We have been advised by S&L that--in their judgment, if such an analysis were made--there is no reason to believe that a hazardous condition would have been found to exist. Since all welds have been repaired, the results of such an analysis would be academic and we do not propose to pursue the matter further.

We trust that the information provided in the attached report is sufficient for your analysis and evaluation of the deficiency and the corrective action. Additional details obtained during the investigation are available in our files.

Sincerely,

W. C. Gerstner
Executive Vice President

JDG:GEW:jh

cc: Director, Office of I&E, NRC, Washington, D. C.

B019
S
1/1

7903150217

S

Report on Construction Deficiency
Clinton Power Station Unit 1
Drywell Wall Platework
(per 10CFR50.55(e)(3))

Deficiency - (per 10CFR50.55(e)(1)(ii))

As the result of a QA audit of radiographic records for the Clinton Power Station Unit #1 lower drywell wall platework field welds, seventeen (17) areas that were previously accepted were identified that did not meet ASME code requirements. These linear indications and slag inclusions were scattered randomly throughout the field welds and totaled less than thirteen inches in length. Sargent and Lundy, the designer, reviewed the indications and concluded that three (3) of the areas did not require repair and that an exhaustive engineering analysis of the remaining fourteen (14) indications would be required to determine their impact on the structural integrity of the drywell wall. However, it was estimated that the cost of an engineering analysis might well exceed the repair costs and, therefore, a management decision was made to forego the analysis and proceed with the repairs.

The chronology of events leading up to notifying the NRC on 2/1/79 that a potential reportable deficiency (10CFR50.55e) was being investigated relative to the lower drywell wall platework is as follows.

During Baldwin Associates' QA Audit I-112, "Mechanical Fabrication/ Installation" (performed 1/16-19/79), a randomly selected sample of radiographs were reviewed. These radiographs were selected from completed lower drywell wall platework traveler packets. The radiographs were reviewed for the audit team by Baldwin Associates' Technical Services Senior NDE Engineer, a Level II interpreter. During the review, five (5) indications were found which were opined to be outside the acceptance limits as defined in the specified ASME code (Section III, NB-5000 of the 1974 Edition with Summer '75 addenda). When these indications were found, two Baldwin Associates' Level III interpreters were consulted and they agreed that the indications did not meet code requirements.

In an effort to determine if this was an isolated case, a second random selection of radiographs was reviewed. This group of radiographs contained one additional unacceptable indication.

Based on these findings, a decision was made to review all radiographs associated with the drywell wall traveler packets, over sixteen hundred (1600) shots including repairs. This review was performed by two (2) Level II and two (2) Level III interpreters

during the week of 1/22-26/79. A total of seventeen (17) unacceptable indications were found in twelve (12) welds as a result of the total effort.

On 1/29/79 a Level III interpreter of the architect-engineer, Sargent and Lundy, reviewed the radiographs of concern and concurred with the findings of Baldwin Associates' interpreters.

Nonconformance Report No. 1810, dated 1/30/79 was initialed and submitted to Sargent and Lundy for dispositioning. In a letter dated 2/6/79 Sargent and Lundy reported that three (3) of the indications were acceptable for "use-as-is", but that the remaining fourteen (14) should be repaired. Subsequently, in a letter dated 2/20/79 Sargent and Lundy provided their basis for acceptance of the three areas not repaired.

An inspection team from NRC RO III visited the CPS site 2/6-9/79. During this visit, team member Carl Erb reviewed the radiographs, the nonconformance report disposition, and the proposed repair procedure. Mr. Erb was also of the opinion that the indications were unacceptable and commented on the intended repair procedure, which was revised to incorporate his recommendation.

Corrective Action

Repair work started on 2/12/79. In each case, the defect(s) was (were) found, removed, and the re-welds satisfactorily made. All repairs were completed by 3/2/79. In addition to the direct repairs, other corrective action being taken to assure continued compliance to regulatory requirements includes:

1. Baldwin Associates will continue its on-going audit program in a sequence which involves work being installed during its time frame prior to completion.

2. NDE Level III personnel will provide timely audits of radiographs submitted for final record.

3. NDE Level II personnel will be trained in the detection of defects uncovered as a result of an audit and instruction will be provided to obtain Level III assistance in the interpretation on questionable radiographs.

Safety Implications

The corrective actions for the deficiency assure no unsafe installation exists. Because a detailed engineering analysis was not performed the significance of the deficiency to the safety of the plant has not been quantified. The total length of the unacceptable welds amounted to less than one-tenth of one percent ($\leq 0.1\%$) of the field welds. The repairs required for the 14 areas have not been extensive.